# **INDEX**

# \*Photos, maps, and illustrations are marked in hold.

#### A

AAA. see American Automobile Association (AAA)

AAF. see All Aboard Florida (AAF)

Acela Amtrak service. see Amtrak, survival of

Adie Tomer. see Tomer, Adie

air travel 49

Albert Churella. see Churella, Albert

All Aboard Florida (AAF) advantages of 70 cost 72 described 68-69 Miami station of **68**, **70**, **75**, **77** service offered through 71 see also Miami, Florida; train travel

American Automobile Association (AAA) 57, 59

#### Amtrak

California Zephyr train route of 69 survival of 69, 70, 71 at Union Station (Denver) 49 see also train travel

Andrew Goetz. see Goetz, Andrew

Arlington County I-95 lawsuit 20. see also Washington Beltway

Ashland Avenue (Chicago) 4-12. see also bus rapid transit (BRT), in Chicago, Illinois

Atlanta, Georgia, public transportation use in 47

autonomous cars. see self-driving cars

# В

Berg, Nate 55

bicycles. see bike lanes; bike sharing

bike lanes 5, 10, 11

bike-sharing 4, 43, 66

Bill Sirois. see Sirois, Bill

Boulder, Colorado 46, 49, 54. see also FasTracks program

Brenna Conway. see Conway, Brenna

Brian Torcellini. see Torcellini, Brian

Britta Gross. see Gross, Britta

BRT. see bus rapid transit (BRT)

Burt Klein. see Klein, Burt

bus rapid transit (BRT)
in Boulder, Colorado 46
in Chicago, Illinois
alternatives to 8
Ashland Avenue line of 4-12
Chicago plans for 5
goals of 5-6, 9
Jeffery Jump line of 5-6
map of 7
opposition to 6, 8-9, 10, 11 see also Romanelli,
Roger
reasons for 10
support for 10
in Denver, Colorado 43, 46
in Nantes, France 12

bus travel. see bus rapid transit (BRT)

# C

Calgary, Canada, public transportation use in 47

California Zephyr train route 69. see also Amtrak

car lanes, sacrificing for mass transit 5, 6, 10

carless households 10

car travel in Chicago, Illinois 4-6, 8 in Denver, Colorado 43, 45, 47, 54 in Washington, D.C. 14-23 see also car-sharing

carpooling see car-sharing; high occupancy vehicle (HOV) lanes on Washington Beltway

car-sharing 4, 47, 66. see also Uber

Chevrolet Volt 58. see also electric cars

Chicago, Illinois 4-12. see also bus rapid transit (BRT), in Chicago, Illinois

Chris Urmson, see Urmson, Chris

Chris Ziemann. see Ziemann, Chris

Churella, Albert 70, 71

Colorado. see Boulder, Colorado; Denver, Colorado

commuting 1, 13-15, 22, 28, 46-47, 54. see also traffic

complete streets 9

Conway, Brenna 10

Critical Mass 8, see also bike lanes

#### D

DARPA. see Defense Advanced Research Projects Agency (DARPA)

David Levinson, See Levinson, David

Defense Advanced Research Projects Agency (DARPA) 27, 30

Dellinger, Matt 4

Denver, Colorado commuting habits in 47 history of transportation in 45, 47-48, 49 political culture in 52 urban development in 42-54 see also FasTracks program; Lower Downtown (LoDo) Development; Union Station (Denver)

Denver International Airport 52

Denver Tech Center 53

Dimitri Dolgov. see Dolgov, Dimitri

Dolgov, Dimitri 24, 26, 29, 31, 32, 38. see also Google self-driving car project

Downtown Project 66. see also Tesla

driverless cars. see self-driving cars

#### E

E-Z Pass. see high-occupancy-toll (HOT) lanes on Washington Beltway, E-Z Pass use

Earl Swift. see Swift, Earl

electric cars
charging 55
as hybrids 65-66
limitations due to market for 58
as percentage of total car sales 57-58
see also Chevrolet Volt; Nissan Leaf;
Superchargers; Tesla; Toyota Prius

Emanuel, Rahm 5, 12. see also Chicago, Illinois

Eric Jaffe. see Jaffe, Eric

Federal Highway Administration 18

# F

FasTracks program
approval of 45
bus rapid transit (BRT) in 46
construction 52, 53
described 43, 46
frequency of service 53
increased use of public transport due to 50-51
investment outcomes 50
map 44
obstacles to success 47
support for 43, 51
Westminster Station 45
see also Denver, Colorado; Lower Downtown
(LoDo) Development; Union Station (Denver)

Flagler, Henry 72, 73, 74. see also Florida East Coast Railway

Florida. see Fort Lauderdale, Florida; Miami, Florida; Orlando, Florida; West Palm Beach, Florida

Florida East Coast Industries (FECI) 72, 76. see also Gonzalez, Jose; Signorella, Vincent

Florida East Coast Railway 72, 72

Florida Fun Train 71

Fluor Corporation 15, 18, 20. see also Transurban Group

Flynn, Kevin 52, 53, 54. *see also* Regional Transporation District (RTD)

Fort Lauderdale, Florida 73, 76. see also All Aboard high-occupancy-toll (HOT) lanes on Washington Florida (AAF) Beltway 495 Express Lanes on 17-18, 21 conversion to 15, 17 G cost of using 18-19 E-Z Pass use on 19-20 enforcement of 19 Gabe Klein, see Klein, Gabe length of 20 low-income drivers and 20 General Motors 58 map of 16 number of drivers using 19-20 Generation Y. see Millennials possible consequences of 22 traffic flow on 18 Goetz, Andrew 50. see also Union Station (Denver) time saved by using 18 Turkeycock flyover on 21-22 Gonzalez, Jose 72, 73, 74. see also Florida East Coast Industries (FECI) high-occupancy-vehicle (HOV) lanes on Washington Beltway 14 Google self-driving car project 24-40 driver training for 34 high-speed rail driving process in 25, 28-30 cost of 71 history of 25, 26 economic impact of 76 Lexus RX 450h in 25-26 Italian 71-72 limitations of 29, 33-34, 38-39 see also Amtrak; light rail; train travel manual control in 29, 36, 38 maps used in 30,38 HOT lanes. see high-occupancy-toll (HOT) lanes on prototype features of 25-26 Washington Beltway reasons for 28 recognizing temporary stops in 35 HOV lanes. see high-occupancy-vehicle (HOV) lanes route of test-drive for 27 on Washington Beltway safety measures for 34-35 technological advances in 36 hybrid cars 65-66. see also electric cars what the car sees in 30, 31, 33, 37 see also Dolgov, Dimitri; Torcellini, Brian; Urmson, Hyundai Rotem, low-floor train manufacture by 53 Chris Google X 26 I Grabar, Henry 68 Illinois. see Chicago, Illinois Grescoe, Taras 42 Industrial Council of Nearwest Chicago 9 Gross, Britta 58, 66 Interstate 25 (I-25) in Colorado 45. see also Guitar, John 71. see also All Aboard Florida (AAF) FasTracks program Interstate 395 (I-395) in Virginia. see Washington **Beltway** Н Interstate 495 (I-495) in Virginia. see high-Hancock, Michael 53. see also Denver, Colorado occupancy-toll (HOT) lanes on Washington Beltway; Washington Beltway Henry Flagler, see Flagler, Henry Interstate 95 (I-95) in Virginia. see Washington Henry Grabar. see Grabar, Henry Beltway Hertz Rent-a-Car 60 Hickenlooper, John 43. see also Denver, Colorado; FasTracks program J. Douglas Koelemay. see Koelemay, J. Douglas

Jaffe, Eric 2, 24

Jeffery Jump line 5-6. see also bus rapid transit (BRT), in Chicago, Illinois

John Guitar. see Guitar, John

John Hickenlooper, John

Jones, Patrick 61. see also Tesla

Jose Gonzalez, Jose

# K

Klein, Burt 9.

Klein, Gabe 5, 12

Koelemay, J. Douglas 20, 22-23

# L

Las Vegas, Nevada 66

Levinson, David 69, 76. see also research institutions, University of Minnesota

Lexus RX 450h 25-26. *see also* Google self-driving car project

light-rail 43-47 (44, 45), 50. see also Amtrak; FasTracks program; high-speed rail; train travel

Lipman, Timothy 65. see also hybrid cars; University of California at Berkeley

Los Angeles, California, public transport use in 47

Lower Downtown (LoDo) development 49. see also Denver, Colorado; FasTracks program

#### M

maps 7, 16, 27, 30, 31, 33, 37, 44, 61

Matt Dellinger. see Dellinger, Matt

Max Morrow. see Morrow, Max

Melinda Pollack. see Pollack, Melinda

Miami, Florida All Aboard Florida (AAF) in 68-77 empty storefronts in **75** population of downtown 76 Miami, Florida (continued) tourism in 70 see also All Aboard Florida (AAF)

Michael Hancock. see Hancock, Michael

Michael Nicholas. see Nicholas, Michael

Mike Reininger. see Reininger, Mike

Mile High Connects 51. see also Denver, Colorado

Millennials, transportation preferences of 50

Modern Ashland Bus plan 8. see also bus rapid transit (BRT), in Chicago, Illinois, opposition to

Morrow, Max 51

Mountain View, California **24**, 39. *see also* Google self-driving car project

#### N

Nate Berg. see Berg, Nate

Nevada. see Las Vegas, Nevada

Nicholas, Michael 58, 61-62. see also University of California at Davis

Nissan Leaf 56. see also electric cars

Northwest Rail Line **45**, 46. see also Boulder, Colorado; FasTracks program

#### 0

Orlando, Florida 68, 70, 71. see also All Aboard Florida (AAF)

Owens, Stephen 74. see also All Aboard Florida (AAF)

#### P

Patrick Jones. see Jones, Patrick

Phil Washington. see Washington, Phil

Philip Shucet. see Shucet, Philip

photographs of Chicago **4, 10** of Washington, D.C. **13, 18, 21** of Google self-driving car project **24, 35**  photographs (continued) of Denver **42**, **45**, **48**, **52**, of Tesla **55**, **56**, **59**, **63**, of Florida **68**, **70**, **73**, **75**,

Pioneer Zephyr 48. see also train travel

Pollack, Melinda 51

Project 100 66. see also bike-sharing; car-sharing

public transportation
in Chicago, Illinois 4-12 (7). see also bus rapid transit (BRT), in Chicago, Illinois
in Denver, Colorado 46-47, 50. see also FasTracks program
use by Millennials 50

#### R

race considerations in transportation 5, 9

Rahm Emanuel. see Emanuel, Rahm

railroad. see train travel; trains, freight

real estate, transportation and 74, 76

Regional Transportation District (RTD) and FasTracks program 43, 45, 49, 50, 52 I-225 rail line 53 see also Denver, Colorado; FasTracks Program; Union Station (Denver)

Reininger, Mike 71, 74. see also All Aboard Florida (AAF)

research institutions for transportation
Brookings Institution
Metropolitan Policy Program 69
Defense Advanced Research Projects Agency
(DARPA) 27, 30
Google X 26
University of California at Berkeley
Transportation Sustainability Research Center 65
University of California at Davis
Plug-In Hybrid and Electric Vehicle Research
Center 58
University of Minnesota 69

ride-sharing. see car-sharing

Rio Grande Zephyr 69. see also Amtrak; train travel

Roger Romanelli, see Romanelli, Roger

Romanelli, Roger 6, 8, 12

RTD. see Regional Transportation District (RTD)

# S

Sam Weinstein. see Weinstein, Sam

Shucet, Philip 17. see also Virginia Department of Transportation (VDOT)

self-driving cars 38. see also Google self-driving car project

Signorella, Vincent 72. see also Florida East Coast Industries (FECI)

Sirois, Bill 49, 55. see also Regional Transportation District (RTD)

socioeconomic issues in transportation gentrification 9 homeless population, displacement of 73 low-income access to transportation 51 low-income drivers and HOT lanes 20

Stephen Owens, Stephen

Superchargers availability of 58 charging time for Teslas at 55 cost of building 62 locations of 55, **56**, 60, **61**, 62, **63**, 66 skepticism regarding 65

sustainability in transportation 41-77

Swift, Earl 13

# T

T-Rex. see Transportation Expansion (T-Rex)

Taras Grescoe. see Grescoe, Taras

Tesla 55-67
batteries for 56, 57, 58
charging stations for
in Barstow, California 55, **56**in Kingman, Arizona 55, **63**in Las Vegas, Nevada 66
cost of 62
driving range of 56, 63-64
Model S 55, 62
Superchargers for 55
towing, liability of 59-60

Timothy Lipman. see Lipman, Timothy

toll roads. see high occupancy toll (HOT) lanes on Washington Beltway

Tomer, Adie 69, 76

Torcellini, Brian 24, 29, 34, 36. see also Google selfdriving car project

Toyota Prius 67. see also electric cars

traffic

in Denver, Colorado 45, 51
in Washington, D.C.
causes of, 15
nature of, 13-14, 17
solutions for. see high-occupancy-toll (HOT)
lanes on Washington Beltway; highoccupancy-vehicle (HOV) lanes on Washington
Beltway

train travel
private passenger 68-77
decline of 69
revival of 69, 76
see also Amtrak; FasTracks program; high-speed
rail; Union Station (Denver)

trains, freight 46, 69, 76

trains, intercity 69, 73, 74, 76. see also All Aboard Florida (AAF)

trains, passenger. *see* high-speed rail; trains, intercity

Transportation Expansion (T-Rex) 45. see also Denver, Colorado

Transurban Group 15, 18, 20. see also Fluor Corporation

Turkeycock flyover on Washington Beltway 21-22. see also high-occupancy-toll (HOT) lanes on Washington Beltway; Washington Beltway

# U

Uber 39. see also car-sharing

Union Station (Denver)
described 47-49
effects of opening 50
renovation of **48**, 49
see also Denver, Colorado; FasTracks program

University of California at Berkeley, Transportation Sustainability Research Center 65

University of California at Davis, Plug-In Hybrid and Electric Vehicle Research Center 58

urban development in Chicago, Illinois 4-12 in Denver, Colorado 42-54 urban development (continued) in Las Vegas, Nevada 66 in Miami, Florida 68-77 transit in 77

Urban Land Conservancy 49. see also FasTracks
Program

Urmson, Chris 26, 28, 30, 32, 38, 39. *see also* Google self-driving car project

# V

VDOT. see Virginia Department of Transportation

value capture, defined 74. see also real estate

Vincent Signorella. see Signorella, Vincent

Virginia Department of Transportation (VDOT) 14, 15, 17, 18, 22

#### W

Washington Beltway
defined 14
lawsuit by Arlington County regarding 20
relieving traffic on 13-23
see also high-occupancy-vehicle (HOV) lanes on
Washington Beltway; high-occupancy-toll
(HOT) lanes on Washington Beltway;
Turkeycock flyover

Washington, D.C. 13-23. see also Washington Beltway

Washington, Phil 43, 53. see also Regional Transportation District (RTD)

Weinstein, Sam 63-64. see also Tesla

West Palm Beach, Florida 73, 76. see also All Aboard Florida (AAF)

#### 7.

Ziemann, Chris 9. see also bus rapid transit (BRT)